

University of Michigan Law School

## University of Michigan Law School Scholarship Repository

---

Law Librarian Scholarship

Other Publication Series

---

2024

### Biophilic design and biophilic cities: an explainer

Kincaid Brown

*University of Michigan Law School, kcb@umich.edu*

Available at: <https://repository.law.umich.edu/librarian/55>

Follow this and additional works at: <https://repository.law.umich.edu/librarian>



Part of the [Land Use Law Commons](#), [Urban, Community and Regional Planning Commons](#), and the [Urban Studies and Planning Commons](#)

---

#### Recommended Citation

Brown, Kincaid C. Biophilic design and biophilic cities: an explainer. *Mich. B. J.* 103, no. 1 (2024): 50-51

This Article is brought to you for free and open access by the Other Publication Series at University of Michigan Law School Scholarship Repository. It has been accepted for inclusion in Law Librarian Scholarship by an authorized administrator of University of Michigan Law School Scholarship Repository. For more information, please contact [mlaw.repository@umich.edu](mailto:mlaw.repository@umich.edu).

MICHIGAN  
**BAR**  
JOURNAL

JANUARY 2024 • VOL. 103 • NO. 01

OFFICIAL JOURNAL OF THE STATE BAR OF MICHIGAN  
EXECUTIVE DIRECTOR: PETER CUNNINGHAM

MANAGING EDITOR  
**MIKE EIDELBES**

ADVERTISING  
**STACY OZANICH**

DIRECTOR OF COMMUNICATIONS  
**MARJORY RAYMER**

LAYOUT ASSISTANCE  
**CIESA INC.**

DESIGN & ART DIRECTION  
**SARAH BROWN**

THEME EDITORS  
**JOHN RUNYAN JR.**  
**AMY L. STIKOVICH**

**MICHIGAN BAR JOURNAL COMMITTEE**  
CHAIRPERSON: JOHN R. RUNYAN JR.

NARISA BANDAU

GERARD V. MANTESE

AUSTIN BLESSING-NELSON

MICHAEL KEITH MAZUR

MARY BRADLEY

NEAL NUSHOLTZ

KINCAID C. BROWN

ALEXANDRA PAGE

DANIEL J. CHERRIN

ANTOINETTE R. RAHEEM

MARINA TAKAGI COBB

CHANNING ROBINSON-HOUMES

DAVID R. DYKI

ROBERT C. RUTGERS JR.

NEIL ANTHONY GIOVANATTI

MATTHEW SMITH-MARIN

NAZNEEN S. HASAN

AMY L. STIKOVICH

JOHN O. JUROSZEK

GEORGE M. STRANDER

JOSEPH KIMBLE

SARA JOY STURING

**CONTACT US**

BARJOURNAL@MICHBAR.ORG

**ADVERTISING**

ADVERTISING@MICHBAR.ORG

**READ ONLINE**

MICHBAR.ORG/JOURNAL

Articles and letters that appear in the Michigan Bar Journal do not necessarily reflect the official position of the State Bar of Michigan and their publication does not constitute an endorsement of views which may be expressed. Copyright 2024, State Bar of Michigan. The Michigan Bar Journal encourages republication and dissemination of articles it publishes. To secure permission to reprint Michigan Bar Journal articles, please email [barjournal@michbar.org](mailto:barjournal@michbar.org).

The contents of advertisements that appear in the Michigan Bar Journal are solely the responsibility of the advertisers. Appearance of an advertisement in the Michigan Bar Journal does not constitute a recommendation or endorsement by the Bar Journal or the State Bar of Michigan of the goods or services offered, nor does it indicate approval by the State Bar of Michigan, the Attorney Grievance Commission, or the Attorney Discipline Board.

Advertisers are solely responsible for compliance with any applicable Michigan Rule of Professional Conduct. Publication of an advertisement is at the discretion of the editor.

The publisher shall not be liable for any costs or damages if for any reason it fails to publish an advertisement. The publisher's liability for any error will not exceed the cost of the space occupied by the error or the erroneous ad.

The Michigan Bar Journal (ISSN 0164-3576) is published monthly except August for \$60 per year in the United States and possessions and \$70 per year for foreign subscriptions by the State Bar of Michigan, Michael Franck Building, 306 Townsend St., Lansing, MI 48933-2012. Periodicals postage paid at Lansing, MI and additional mailing offices. POSTMASTER: Send address changes to the Michigan Bar Journal, State Bar of Michigan, Michael Franck Building, 306 Townsend St., Lansing, MI 48933-2012.

## COLUMNS

**12** FROM THE PRESIDENT  
Count your blessings — then do something  
**Daniel D. Quick**

**44** PLAIN LANGUAGE  
40 years and counting  
**Joseph Kimble**

**46** BEST PRACTICES  
15 tips for a successful arbitration  
**Stephen A. Hilger**

**50** LIBRARIES AND LEGAL RESEARCH  
Biophilic design and biophilic cities: An explainer  
**Kincaid C. Brown**

**52** LAW PRACTICE SOLUTIONS  
Reducing attrition and increasing productivity by tapping into employee discretionary effort  
**Victoria Vuletich and June Kenny**

**56** PRACTICING WELLNESS  
Knowing when to rest your case  
**Dawn Grimes-Kulongowski**

## NOTICES

**60** ORDERS OF DISCIPLINE & DISABILITY  
**64** FROM THE MICHIGAN SUPREME COURT  
**67** FROM THE COMMITTEE ON MODEL  
CRIMINAL JURY INSTRUCTIONS  
**70** CLASSIFIED

# Biophilic design and biophilic cities: an explainer

BY KINCAID C. BROWN

The COVID-19 pandemic brought into focus that outdoor activities in natural settings have a positive impact on mental health, and individuals participating in outdoor activity report higher rates of emotional well-being than individuals who do not participate in such activity.<sup>1</sup> Biophilic design is an architectural practice that aims to connect people to nature through design concepts with one of the benefits being psychological.<sup>2</sup> Other benefits of biophilic design include improvements to environmental quality, physical health, support of animal species and habitats, and more resilient and energy-efficient cities.<sup>3</sup>

While there is a breadth of aspects utilized in biophilic design, some major features include utilization of natural light and ventilation, inclusion of plants and vegetation (such as a living wall), visual connection with the natural world outside, and the use of natural materials and shapes. Examples of buildings that utilize biophilic design concepts are Frank Lloyd Wright's Fallingwater in Pennsylvania, the Khoo Teck Puat Hospital in Singapore, and the Metropol Parasol in Seville, Spain.

The biophilic cities movement is one in which cities across the world work to incorporate biophilic design concepts on a citywide level to reimagine how urban areas interact with the natural world. Many cities are taking advantage of the positives of green (e.g., parks, trees, open space, urban agriculture) and blue (e.g., urban ponds and lakes, storm drainage) infrastructure<sup>4</sup> because of the real benefits of better water management and energy savings, the population's improved mental and physical health in these settings, and increased equity of access to the natural environment.<sup>5</sup>

Urban tree planting, planning, and maintenance are prime examples of biophilic practice that many cities have intentionally or unintentionally taken part in because of its myriad benefits. These

benefits include reduced air temperatures leading to lower energy costs; reduced noise and environmental pollution; mitigation of runoff and flooding; and improvements to the health and well-being of the urban population.<sup>6</sup> A 2020 report estimated that tree cover in urban areas produced more than \$18 billion in air pollution removal and upwards of \$5 billion in reduced building energy use.<sup>7</sup> The Vibrant Cities Lab,<sup>8</sup> created in part by the U.S. Department of Agriculture Forest Service, is proponent of urban forestry for these benefits as well as other reasons including traffic calming,<sup>9</sup> improved academic performance for children,<sup>10</sup> and crime reduction.<sup>11</sup> Many Michigan cities, including Ann Arbor,<sup>12</sup> Detroit,<sup>13</sup> and Royal Oak,<sup>14</sup> have tree planting programs for these reasons.

There are many aspects to making a biophilic city.<sup>15</sup> Most obvious is the relation the city has to nature including the availability of parks, proximity of natural habitats and tree cover, and impact on urban biodiversity. Other characteristics include the amount and demographics of the local population visiting nature, places where school children are able to have recess, community engagement in planning and programming, and ecoliteracy.<sup>16</sup> A network of partner biophilic cities exists and includes cities in the United States like Austin, Texas; Kansas City, Missouri; and Pittsburgh, Pennsylvania as well as international cities like Barcelona, Spain; Edinburgh, Scotland; and Singapore.<sup>17</sup>

There are many ways that cities can employ to embrace biophilic values that involve planning and governance. The most obvious one is allocating budget for urban greenery improvements including park and nature area conservation, tree planting, and incorporating green space in urban construction projects. Another is to plan and strategize toward carbon neutrality or flood mitigation infrastructure, like in Hoboken, New Jersey.<sup>18</sup> Cities can also move in this direction by revising zoning, tax, and construction regula-

tions and ordinances to make development incorporating biophilic facets more cost-effective and attractive. Examples include biophilic standards or goals in zoning schemes, tax incentives to construct sustainable buildings, and guidance for builders to conserve habitat and public rights-of-ways. Other measures that cities can employ to embrace biophilic tenets include nature-based education in public schools, public support of nature-based events and stewardship programs, and community information sharing.<sup>19</sup>

While it is not mandatory to employ biophilic design elements in construction, there are certification organizations that employ biophilic elements in their standards. Two of the most well-known of these standards are the International WELL Building Standard<sup>20</sup> and the LEED Rating System.<sup>21</sup> While the two standards have similarities,<sup>22</sup> they differ from their starting points. The WELL standards are focused on the individual, with the grounding that the buildings, where humans spend so much of our time, impact health and well-being.<sup>23</sup> LEED, the more widely used green building rating system, has a focus on environmental, social, and governance benefits reached through sustainability, enhanced human health and community quality of life, and environmental benefits through reduced energy consumption and conservation of water resources.<sup>24</sup>

---

**Kincaid C. Brown** is the director of the University of Michigan Law Library. He is a member of the SBM Michigan Bar Journal Committee and a former member of the Committee on Libraries, Legal Research and Legal Publications.

---

## ENDNOTES

1. See, e.g., Fernandez, M. Pilar, et al., "Outdoor Activity Associated with Higher Self-Reported Emotional Well-Being During COVID-19," 19#2 *Ecohealth* 154 (2022). <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9186007/>> [all websites accessed October 26, 2023].

2. "The Six Principles of Biophilic Design," *Neumann Monson Architects* (2022). <<https://neumannmonson.com/blog/six-principles-biophilic-design>>.
3. Julia Africa, et al., "Biophilic Design and Climate Change: Performance Parameters for Health," 5#28 *Frontiers in Built Environment* 1 (March 2019). <<https://doi.org/10.3389/fbuil.2019.00028>>.
4. GreenBlue Urban, "Why Green and Blue?" <<https://greenblue.com/na/about-us/why-green-and-blue/>>.
5. Tim Beatley and JD Borwn, "The Health Biophilic City," *IUCN World Congress* (November 2019). <<https://www.iucncongress2020.org/newsroom/all-news/healthy-biophilic-city>>.
6. David Nowak, "Taking Stock: The First Step to Creating Healthier Cities with Trees," 3#2 *Biophilic Cities* 22 (June 2020).
7. *Id.*
8. *Vibrant Cities Lab*, <<https://www.vibrantcitieslab.com/>>.
9. *Trees Improve Transportation*, Vibrant Cities Lab <<https://www.vibrantcitieslab.com/transportation/>>.
10. *Trees Improve Education*, Vibrant Cities Lab <<https://www.vibrantcitieslab.com/education/>>.
11. *Trees Improve Public Safety*, Vibrant Cities Lab <<https://www.vibrantcitieslab.com/public-safety/>>.
12. *Resident Street Tree Planting Program*, City of Ann Arbor Michigan <<https://www.a2gov.org/departments/public-works/Pages/Resident-Street-Tree-Planting-Pilot-Project.aspx>>.
13. *Community Tree Planting*, The Greening of Detroit <<https://www.greeningofdetroit.com/community-tree-planting>>.
14. *Tree Planting Program*, Royal Oak Public Services <<https://www.romi.gov/323/Tree-Planting-Program>>.
15. JD Brown, "Indicators of a Biophilic City," 5#1 *Biophilic Cities* 46 (May 2023).
16. *Id.*
17. *Partner Cities*, Biophilic Cities <<https://www.biophiliccities.org/partner-cities>>.
18. Michael Kimmelman, "A Climate Change Success Story? Look at Hoboken." *New York Times* (November 3, 2023) <<https://www.nytimes.com/2023/11/03/headway/hoboken-floods.html>>.
19. Brown *supra*, note 15.
20. *WELL Building Standard*, International WELL Building Institute <<https://standard.wellcertified.com/well>>.
21. *LEED rating system*, U.S. Green Building Council <<https://www.usgbc.org/leed>>.
22. International WELL Building Institute, *The WELL Building Standard: v1 with May 2016 addenda*, (2016) at 212. <<https://standard.wellcertified.com/sites/default/files/The%20WELL%20Building%20Standard%20v1%20with%20May%202016%20addenda.pdf>>.
23. IWBI *supra*, note 20.
24. USGBC *supra*, note 21.